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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/505,442

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Naoki Mitsuta

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EXAMINER

ECHELMAYER, ALIX ELIZABETH

ART UNIT

PAPER NUMBER

1795

NOTIFICATION DATE

DELIVERY MODE

07/11/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

DCIPDocket@arentfox.com
IPMatters@arentfox.com
Patent_Mail@arentfox.com

Office Action Summary	Application No. 10/505,442	Applicant(s) MITSUTA ET AL.	
	Examiner Alix Elizabeth Echelmeyer	Art Unit 1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 12 and 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/31/04, 10/19/04, 11/16/04, 2/11/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 12 and 13 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected group, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on April 17, 2008.
2. Claims 1-11 are rejected for the reasons given below.

Drawings

3. Figures 7 and 8 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Art Unit: 1795

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

5. Claims 1, 4, 5 and 9 are rejected under 35 U.S.C. 102(e) as being anticipated by Yandrasits et al. (US 6,979,383).

Yandrasits et al. teach a fuel cell having a membrane electrode assembly sealed by an adhesive, or gasket, that impregnates gas diffusion layers on either side of the membrane (abstract). The adhesive forms a picture-frame seal around the catalyst between the membrane and the diffusion layers (Figure 7; column 4 line 66 - column 5 line 9).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 2, 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yandrasits et al. as applied to claims 1 and 5 above, and further in view of Mowrer et al. (US 5,942,073).

Yandrasits et al. teach a cured adhesive surrounding the catalyst on either side of a membrane electrode assembly and permeated into the diffusion layer, which may be treated with certain coatings (column 3 lines 5-17).

Yandrasits et al. fail to teach a polysiloxane having two or more alkenyl groups and a tensile elongation at break of 150% or more.

Mowrer et al. teach an adhesive/adherent system comprising a polysiloxane resin having alkenyl side groups (abstract, column 3 lines 51-64).

Mowrer et al. teach that the polysiloxane adhesive is desirable when the adherent also contains siloxane, as could the coating of Yandrasits et al., because of the bonds that form between the Si and O atoms (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the adhesive/adherent system of Mowrer et al. in the assembly of Yandrasits et al. since the bonding between the siloxane units would be strong.

As for the tensile elongation and amount of filling, if the polysiloxane of Mowrer et al. was used in the membrane electrode assembly of Yandrasits et al., these properties would be inherent because the adhesive of Mowrer et al. is the same as the claimed adhesive.

8. Claims 7, 8, 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yandrasits et al. as applied to claim 1 above, and further in view of Healy et al. (US 2005/0058870).

Yandrasits et al. fail to teach that the outer circumferential edge of the catalyst on one side of the membrane is positioned at a different or inner portion than the other catalyst.

Healy et al. teach that the catalyst layers overlap, or that the outer circumferential edge of one catalyst layer is at an inner portion than the outer circumferential edge of the catalyst on the other side of the membrane (Figure 1, abstract).

Healy et al. further teach that such a configuration helps to prevent ionomer degradation of the electrolyte (abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to make the outer circumferential edge of one catalyst layer at an inner portion than the outer circumferential edge of the catalyst on the other side of the membrane, since that configuration helps to prevent ionomer degradation of the electrolyte.

As for claims 10 and 11, Yandrasits et al. fail to teach the use of the fuel cell in an electrical apparatus or an automobile or transport apparatus.

Healy et al. teach the use of fuel cells in automobiles ([0035]).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the fuel cell of Yandrasits et al. in an automobile such as taught by Healy et al. since it is well known that automobiles consume electricity, and it is also well known that fuel cells do not consume gasoline, so one having ordinary skill in the art would recognize the advantage of running an automobile with a fuel cell so as to reduce the consumption of gasoline.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alix Elizabeth Echelmeyer whose telephone number is (571)272-1101. The examiner can normally be reached on Mon-Fri 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Susy N. Tsang-Foster can be reached on 571-272-1293. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Alix Elizabeth Echelmeyer
Examiner
Art Unit 1795

aee
/Susy Tsang-Foster/
Supervisory Patent Examiner, Art Unit 1795